

REMARKS/ARGUMENTS

Applicants respond herein to the Office Action of June 26, 2007. Claims 1-4 were rejected in the Office Action. Applicants add new Claims 14-19 and respectfully request a reconsideration of the rejection. Support for new Claims 18 and 19 is found on page 22, line 7 to page 24, line 12 of the specification. Claims 1-4 and 14-19 are pending in the application.

Claims 1-4 have been rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Kanno et al. (U.S. Patent No. 5,918,817). Furthermore, claims 1-4 have been rejected under 35 U.S.C. §102(a) as being anticipated by Izumi et al. (U.S. Patent Publication No. 2003/0170988).

Claim 1 recites, *inter alia*, a limitation of "volume median diameter." This limitation is defined on page 6, line 24 to page 7, line 4 of the specification as "a liquid droplet diameter such that the sum of the volumes of liquid droplets having diameters greater (or smaller) than that liquid droplet diameter accounts for 50% of the total volume of all the observed liquid droplets." By controlling diameters of the liquid droplets based on the volume median diameter, the damage to the substrate surface can be minimized without the need for reducing the flow rate of the gas introduced into the bifluid nozzle (see page 7 lines 16-24 of the specification). For the same group of droplets, a volume median diameter is greater than an arithmetic mean diameter thereof. Kinetic energy of the group of the droplets is more effectively estimated using the volume median diameter than the arithmetic mean diameter.

Applicants believe that it is unnecessary to include a full definition of the "volume median diameter" in the Claims. However, for clarification, Applicants added new independent Claim 14, which recites the same limitations as Claim 1 but includes the full definition of the "volume median diameter," as disclosed on page 6, line 24 to page 7, line 4 of the specification. Claims 15-17 include limitation found in original Claims 2-4.

Neither Kanno nor Izumi disclose or suggest generating treatment droplets having a volume median diameter of $5\mu\text{m}$ to $40\mu\text{m}$, as recited in Claims 1 and 14 and as defined in the specification of the present application. Accordingly, Claims 1 and 14 are allowable over the cited prior art.

Claims 2-4 and 15-19 depend directly or indirectly from Claims 1 and 14. Therefore, Claims 2-4 and 15-19 are allowable at least for the same reasons as Claims 1 and 14 and, further, on their own merits.

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Reconsideration of the rejections and allowance of all pending claims is respectfully requested.

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office, on September 26, 2007:

James A. Finder

Name of applicant, assignee or
Registered Representative

Signature

September 26, 2007

Date of Signature

Respectfully submitted,

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